

drawing before 1st Or

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
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SARA A. CENTIONI NEXSEN PRUET, LLC POST OFFICE DRAWER 2426 COLUMBIA, SC 29202-2426

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COPY MAILED

SEP 0 9 2004

OFFICE OF PETITIONS

In re Application of Brian J. Bagwell Application No. 10/816,058 Filed: April 1, 2004 Attorney Docket No. 32984-1

DECISION GRANTING PETITION

This is a decision on the petition filed July 28, 2004, to accord the above-identified application a filing date of April 1, 2004.

On April 1, 2004, the application was deposited.

On July 22, 2004, the Office of Initial Patent Examination mailed a Notice stating that drawings were not present and that a filing date had not been accorded and the filing date would be the date of receipt of the drawings.

In response, the present petition alleges that the drawings did accompany the original application papers. Petitioner also provided statement from persons with knowledge of the filing of the application and a copy of an Office date-stamped postcard acknowledging receipt of an unspecified number of drawings, among other items.

The drawings were not found with the application papers, and the itemization of the postcard is lacking in that it does not indicate how many sheets of drawings were received. It has determined, however, that drawings are not necessary to understand at least one claim within the meaning of the first sentence of 35 USC 113. It has been PTO practice to treat an application that contains at least one process or method claim as an application for which a drawing is not necessary for an understanding of the invention under 35 U.S.C. 113 (first sentence). A review of the record reveals that claim 13 is a method claim. Therefore, the present application is deemed to be an application that does not require a drawing for an understanding of the invention. Accordingly, the application, as filed, is entitled to a filing date. Petitioner must file an amendment requesting entry of the drawings filed July 28, 2004, prior to the first action on the merits.

In view of the above, the petition is granted.

The application is being returned to the Office of Initial Patent Examination for further processing with a filing date of April 1, 2004, using only those application papers filed on April 1, 2004.

MPEP 601.01(f).

SEP 1 3 7904

BEST AVAILABLE COPY

Any inquiries related to this decision should be directed to the undersigned at (703)305-0010.

Kenya A. McLaughlin

Petitions Attorney
Office of Petitions



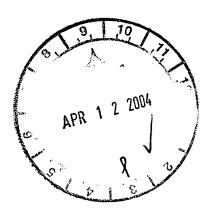


PATENT APPLICATION FILING IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Transmittal Letter; Patent Application Transmittal Letter; Utility Patent Application Transmittal; Power of Attorney; Formal Drawings; Certificate of Express Mailing; Postcard

In re: Brian Bagwell
Atty Docket: 32984-1
Atty: SARA A CENTIONI

Atty: SARA A. CENTIONI
Title: Compacting Method and Apparatus





UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS Alexandria, Vinginia 22313-1450 www.unptu.gov

APPLICATION NUMBER

FILING OR 371 (c) DATE

FIRST NAMED APPLICANT

ATTORNEY DOCKET NUMBER

10/816.058

04/01/2004

J. Brian Bagwell

32984-1

SARA A. CENTIONI NEXSEN PRUET, LLC **POST OFFICE DRAWER 2426** COLUMBIA, SC 29202-2426

CONFIRMATION NO. 9636 FORMALITIES LETTER OC000000013303846*

Date Mailed: 07/22/2004

NOTICE OF INCOMPLETE NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

A filing date has NOT been accorded to the above-identified application papers for the reason(s) indicated below.

All of the items noted below and a newly executed oath or declaration covering the items must be submitted within TWO MONTHS of the date of this Notice, unless otherwise indicated, or proceedings on the application will be terminated (37 CFR 1.53(e)). Replies should be mailed to: Mail Stop Missing Parts, Commissioner for Patents, P.O. Box 1450, Alexandria VA 22313-1450.

The filing date will be the date of receipt of all items required below; unless otherwise indicated. Any assertions that the item(s) required below were submitted, or are not necessary for a filing date, must be by way of petition directed to the attention of the Office of Petitions accompanied by the \$130.00 petition fee (37 CFR 1.17(h)). If the petition states that the application is entitled to a filing date, a request for a refund of the petition fee may be included in the petition. Petitions should be mailed to: Mail Stop Petitions, Commissioner for Patents, P.O. Box 1450, Alexandria VA 22313-1450.

 The application was deposited without drawings. 35 U.S.C. 113 (first sentence) requires a drawing "where necessary for the understanding of the subject matter sought to be patented." Applicant should reconsider whether the drawings are necessary under 35 U.S.C. 113 (first sentence).

Replies should be mailed to:

Mail Stop Missing Parts

Commissioner for Patents

P.O. Box 1450

Alexandria VA 22313-1450

A copy of this notice <u>MUST</u> be returned with the reply.

Customer Service Center

Initial Patent Examination Division (703) 308-1202

	Response To Notice To File Missing Parts Of Application Filing Date Granted (PTO-1533)(Smell Entity) Docket No. 32984-01						
In F	Re Application	Of: BAGWELL, BE	RIAN J. 0CT 0 1 2004	1024 2			
	plication No. 0/816,058	Filing Date 04/01/2004	Examine to physical UNKNOWN	Customer No.	Group Art Unit	Confirmation No	
	ention: MPACTING MI	ETHOD AND APPAI	RATUS				
	-		Mail Stop Missing Par				
	7/22/04 Date	to the Notice to File M for filing are the follow	Missing Parts of Application -		ted (PTO-1533) r	mailed on	
		· - -	ng Parts of Application - Filing	n Date Granted (I	PTO-1533). (RE	OHIRED)	
	An oath or d	declaration in compli	iance with 37 CFR 1.63, inclion Number and Filing Date.			·	
	A properly siç	gned oath or declara	ation in compliance with 37 CFI	R 1.63.	·	-	
	An oath or do	eclaration in compliantor(s), identifying this	ance with 37 CFR 1.63 listing s application by the above App	g the names of plication Number	all inventors and rand Filing Date.	I signed by the	
	A verified English translation of the non-English language application papers as originally filed. It is requested that this translation be used as the copy for examination purposes in the United States Patent and Trademark Office.						
	verified small entity declaration(s)						
	is/are atta	ached.					
	☐ was/were	; filed on					
☒	A separate red	quest for refund.					
	Other (list):					_	
			RIE COBHB WHO HAS FIRST			LL ITEMS	

Response To Notice To File Missing Parts Of Application Docket No. Filing Date Granted (PTO-1533)(Small Entity) 32984-01 In Re Application Of: BAGWELL, BRIAN J. Application No. Filing Date Examiner Customer No. Group Art Unit Confirmation No. 10/816,058 04/01/2004 **UNKNOWN** UNKNOWN Invention: COMPACTING METHOD AND APPARATUS TO THE COMMISSIONER FOR PATENTS: Mail Stop Missing Parts ☐ Completion of application fees as calculated below: ☐ Utility application filing fee ☐ Design application filing fee ☐ Total number of independent claims = ☐ Total number of claims = ☐ Multiple dependent claims Surcharge for late payment of filing fee and/or late filing of original declaration or oath Petition and fee for filing by other than all the inventors or a person not the inventor ☐ Fee for processing an application filed with a non-English language specification ☐ Fee for processing and retention of application Total completion of application fees This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a response to the above-identified Notice to File Missing Parts of Application. The requested extension is as follows (check time period desired). If an additional time extension is required, please consider this a petition therefor. One month ☐ Two months ☐ Three months ☐ Four months ☐ Five months from: until: Total time extension fees Total fees due

Response To Notice To File Missing Parts Of Application Filing Date Granted (PTO-1533) (Small Entity)

Docket No. 32984-01

Application No. 10/816,058

Filing Date 04/01/2004

Examiner UNKNOWN

Customer No.

Group Art Unit
UNKNOWN

Confirmation No.

Invention:

COMPACTING METHOD AND APPARATUS

In Re Application Of: BAGWELL, BRIAN J.

TO THE COMMISSIONER FOR PATENTS:

Mail Stop Missing Parts

The fee of \$130.00 is to be paid as follows:

- ☐ A check in the amount of the fee is enclosed.
- The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account No. 080719
- If an additional extension of time is required, please consider this a petition therefor and charge any additional fees which may be required to Deposit Account No. 080719

Signature Signature

Dated: JULY 26, 2004

SARA A. CENTIONI REG NO. 50,543 NEXSEN PRUET, LLC POST OFFICE DRAWER 2426

COLUMBIA, SC 29202-2426 TEL: (803) 771-8900

FAX: (803) 253-8277 SCENTIONI@NEXSENPRUET.COM I certify that this document and fee is being deposited on July 27, 2084 with the U.S. Postal Service as first class mail under 37 C.F.R. 1.8 and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Signature of Person Mailing Correspondence

A. MARIE COBB

Typed or Printed Name of Person Mailing Correspondence

CC:



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re:

Bagwell, J. Brian

Atty Docket:

32984-01

Serial No.:

10/816,058

Examining Atty:

Unknown

Filing Date:

April 1, 2004

Group Art:

Title:

Compacting Method and Apparatus

Commissioner for Patents Mail Stop Missing Parts P.O. Box 1450 Alexandria, VA 22313-1450

PETITION

Applicant respectfully petitions that the filing date 04/01/04 be officially accorded to the above listed application. Applicant filed application with all the requisite parts, including a specification as prescribed by 35 U.S.C. 112 containing a description pursuant to §1.171 and at least one claim pursuant to §1.75 and any drawing required by §1.81(a) in the Patent and Trademark Office on 04/01/04, pursuant to 37 CFR 1.53. Applicant attaches as proof the affidavits of attorney of record and assistant for attorney of record.

Dated: July 27, 2004

Sara A. Centioni Reg. No. 50,543 Nexsen Pruet, LLC

Post Office Drawer 2426

Columbia, SC 29202-2426

Tel: (803) 771-8900

scentioni@nexsenpruet.com

Certificate of Transmission by U.S. Mail

I hereby certify that this document is being transmitted via U.S. Mail to the Commissioner for Patents, Mail Stop Missing Parts, P.O. Box 1450, Alexandria, VA 22313-1450

Signature





IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re:

Bagwell, J. Brian

Atty Docket:

32984-01

Serial No.:

10/816,058

Examining Atty:

Unknown

Filing Date:

April 1, 2004

Group Art:

Title:

Compacting Method and Apparatus

The Commissioner for Patents P.O. Box 1450 Alexandria. VA 22313-1450

AFFIDAVIT OF SARA A. CENTIONI

- 1. My name is Sara A. Centioni.
- 2. I reviewed the entire patent application, including specification drawings and declaration. thereafter, I signed the application and instructed my assistant, Marie Cobb, to mail the application.
- 3. I observed the application materials before they were placed in an envelope for mailing and these materials included both the drawings and declaration.
- 4. I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any registration resulting therefrom.

Sara A. Centioni

SWORN and subscribed to before me this **26** day of **July**, 2004.

Notary Public for South Carolina
County of Lexing ton

My Commission expires: 3-15-2006

Certificate of Transmission by U.S. Mail

I hereby certify that this document is being transmitted via U.S. Mail to the Commissioner for Patents, Mail Stop Missing Parts, P.O. Box 1450, Alexandria, VA 22313-1450.





IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re:

Bagwell, J. Brian

Atty Docket:

32984-01

Serial No.:

10/816,058

Examining Atty:

Unknown

Filing Date:

April 1, 2004

Group Art:

Title:

Compacting Method and Apparatus

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

AFFIDAVIT OF A. MARIE COBB

- 1. My name is A. Marie Cobb.
- 2. I am a secretary of Nexsen Pruet Jacobs & Pollard, LLC. I have held this position approximately two years.
 - 3. I am specifically assigned to work for Sara A. Centioni, Esquire.
- 4. As part of my responsibilities, as instructed by Attorney Sara A. Centioni, I prepare and file documents with the U.S. Patent and Trademark Office.
- 5. On April 1, 2004, Sara A. Centioni gave the file for the above-referenced matter to me and asked that I mail the non-provisional patent application. now listed as Application Serial No. 10/816,058.
- 6. As instructed, I mailed 32 pages which included the Transmittal, the application, the combined Declaration and Power of Attorney, six sheets of drawings, and a Certificate of Transmission by first class mail. I paper-clipped the entire package and placed it in the mail. To further ensure that the drawings would be not be separated by the U.S. Patent and Trademark Office, I placed the drawings before the Certificate of Mailing.

7. Enclosed is an exact copy of the application as mailed to the U.S. Patent and Trademark Office.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any registration resulting therefrom.

FURTHER AFFIANT SAYETH NOT.

A. Marie Cobb Affiant

SWORN and subscribed to before me this 2743day of July 2004.

Notary Public for South Carolina

County of <u>Levington</u>

My Commission expires: 3-15-2004

Certificate of Transmission by U.S. Mail

I hereby certify that this document is being transmitted via U.S. Mail to the Commissioner for Patents, Mail Stop Missing Parts, P.O. Box 1450, Alexandria, VA 22313-1450.

430c

Signature

PATENT APPLICATION TRANSMITTAL LETTER

(Small Entity)

Docket No. 32984-1

OCT 0 1 2004

TO THE COMMISSIONER FOR PATENTS

Tansmitted herewith for filing under 35 U.S.C. 111 and 37 C.F.R. 1.53 is the patent application of:

BAGWELL, JAMES BRIAN

For: COMPACTING	METHOD AN	D APPARATUS					
Enclosed are: Certificate of Maili SIX A certified copy of Declaration Power of Attorney Information Disclosed Preliminary Amend	sheets of ca a Signed. Sure Statement dment Verified St	drawings	application.			er 37 C.F.R. 1.9	and 1.27.
Curci. 1001 CA	·	CLAIMS	AS FILED		·		
For	#Filed	#Allowed	#Extra		Rate		Fee
Total Claims	15	- 20 =	0	×	\$9.00		\$0.00
Indep. Claims	ndep. Claims 2 - 3 = 0 x \$43.00					\$0.00	
Multiple Dependent Cl	Multiple Dependent Claims (check if applicable)					\$0.00	
	BASIC FEE					\$385.00	
					TOTAL	. FILING FEE	\$385.00
☑ Charge any☐ Charge the	by authorized t amount of verpayment. additional filing	s385.00 a fees required u 37 C.F.R. 1.18	s filing fee. under 37 C.F.R at the mailing SAR REG NEX	. 1.16 a of the N	No.	50,543	

SCENTIONI@NEXSENPRUET.COM

TEL: (803) 771-8900

CC:

0 1 2004

UTILITY PATENT APPLICATION TRANSMITTAL (Small Entity)

Only for new nonprovisional applications under 37 CFR 1.53(b))

Docket No. 32984-1

Total Pages in this Submission 32

TO THE COMMISSIONER FOR PATENTS

Mail Stop Patent Application P.O. Box 1450 Alexandria, VA 22313-1450

		Alexandria, VA 22313-1450		
Transmi invention	itted h n enti	nerewith for filing under 35 U.S.C. 111(a) and 37 C.F.R. 1.53(b) is a new utility patent itled:	application	for an
СОМ	PACT	FING METHOD AND APPARATUS		
_		THE MILITION AND ATTACATOS	6	e se
and inve	nted	by:		
JAME	S BR	IAN BAGWELL .		
<u></u>				-, -
		JATION APPLICATION, check appropriate box and supply the requisite information: ation Divisional Continuation-in-part (CIP) of prior application No.		
Which is		ation Divisional Continuation-in-part (CIP) of prior application No.:		
☐ Cor		ation Divisional Continuation-in-part (CIP) of prior application No.:	- "	-
Which is	a:			
☐ Con	itinua	ation Divisional Continuation-in-part (CIP) of prior application No.:		
Enclosed	are:			
		Application Elements		
1. 🛛	Fili	ng fee as calculated and transmitted as described below		
2. 🛛	Spe	ecification having 17 pages and including the following:		
a.	×	Descriptive Title of the Invention		
b.	\boxtimes	Cross References to Related Applications (if applicable)		
C.		Statement Regarding Federally-sponsored Research/Development (if applicable)		
d.		Reference to Sequence Listing, a Table, or a Computer Program Listing Appendix		
e.	X	Background of the Invention		
f.	\boxtimes	Brief Summary of the Invention		
. g.	×	Brief Description of the Drawings (if filed)		
h.	×	Detailed Description		
· i.	☒	Claim(s) as Classified Below		
j.	×	Abstract of the Disclosure		

始張ITY PATENT APPLICATION TRANSMITTAL (Small Entity) (Small Entity) (Out) for new nonprovisional applications under 37 CFR 1.53(b))

Docket No. 32984-1

Total Pages in this Submission 32

· OT	RADEM	W.		Арр	lication Ele	ments (Continued)
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	b	b. 🗀	Copy from a	a prior application	(37 CFR 1.6	63(d)) (for continuation/divisional application only)
	c	c. 🛛				Power of Attorney
	d	d. 🗀		OF INVENTOR(S)		
			Signed state see 37 C.F.	ement attached del .R. 1.63(d)(2) and 1	leting invented 1.33(b).	tor(s) named in the prior application,
5.	. 🗆	J Inc	corporation By I	Reference (usable	e if Box 4b is	s checked)
		The Box	ne entire disclos ox 4b, is consi	sure of the prior ap	pplication, fro	om which a copy of the oath or declaration is supplied under disclosure of the accompanying application and is hereby
6.	. 🗀			*	e table or Co	omputer Program (Appendix)
· 7.			-	Sheet (See 37 CFF	***	subator i jodiani (johonani)
8.					•	ssion (if applicable, all must be included)
	a.	. 🗆	Computer Re	eadable Form (CFF	R)	
	b.		Specification	Sequence Listing	on:	
			i. 🗋 CD-	P-ROM or CD-R (2	copies); or	
			іі. 🗌 Рар	per		
	C.		Statement(s)	Verifying Identical	Paper and (Computer Readable Copy
				Accon	npanying A	pplication Parts
9.		Assi	ignment Paper	rs (cover sheet & d	locument(s)))
10.		37 C	CFR 3.73(B) St	tatement (when the	∍re is an ass	signee)
11.				n Document (if app	•	
		Infor	mation Disclos	sure Statement/PT	O-1449	☐ Copies of IDS Citations
13.			iminary Amend			
	_					specifically itemized)
	_			Priority Document(s) (if foreign p	priority is claimed)
16.	(2)	Certif	ificate of Mailing	ı g		
	ſ	ו ֹם	First Class 2	Express Mail ((Specify Lab	pel No.): EV 331626075 US

UTILITY PATENT APPLICATION TRANSMITTAL (Small Entity)

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Docket No. 32984-1

Total Pages in this Submission 32

		Accompanying Application Parts (Continued)
17.	X	Applicant claims small entity status. See 37 CFR 1.27.
		Optional) Small Entity Statement(s) - Specify Number of Statements Submitted:
18.		Additional Enclosures (please identify below):
	-	Request That Application Not Be Published Pursuant To 35 U.S.C. 122(b)(2)
19.		Pursuant to 35 U.S.C. 122(b)(2), Applicant hereby requests that this patent application not be published pursuant to 35 U.S.C. 122(b)(1). Applicant hereby certifies that the invention disclosed in this application has not and will not be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication of applications 18 months after filing of the application.
		Warning
·	1	An applicant who makes a request not to publish, but who subsequently files in a foreign country or under a multilateral international agreement specified in 35 U.S.C. 122(b)(2)(B)(i), must notify the Director of such filing not later than 45 days after the date of the filing of such foreign or international application. A failure of the applicant to provide such notice within the prescribed period shall result in the application being regarded as abandoned,

unless it is shown to the satisfaction of the Director that the delay in submitting the notice

was unintentional.

UTILITY PATENT APPLICATION TRANSMITTAL (Small Entity)

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Docket No. 32984-1

Total Pages in this Submission 32

Fee Calculation and Transmittal

CLAIMS AS FILED For #Filed #Allowed #Extra Rate Fee **Total Claims** 15 - 20 = 0 \$9.00 \$0.00 Indep. Claims 2 - 3 = \$43.00 \$0.00 Multiple Dependent Claims (check if applicable) \$0.00 **BASIC FEE** \$385.00 OTHER FEE (specify purpose) \$0.00 **TOTAL FILING FEE** \$385.00 A check in the amount of to cover the filing fee is enclosed. M The Director is hereby authorized to charge and credit Deposit Account No. 080719 as described below. \$385.00 as filing fee. Credit any overpayment. □ Charge any additional filing fees required under 37 C.F.R. 1.16 and 1.17. ☐ Charge the issue fee set in 37 C.F.R. 1.18 at the mailing of the Notice of Allowance, pursuant to 37 C.F.R. 1.311(b). Dated: APRIL 1, 2004 SARA A. CENTIONI **REGISTRATION NO. 50,543** NEXSEN PRUET, LLC **POST OFFICE DRAWER 2426** COLUMBIA, SC 29202-2426 TEL: (803) 771-8900 CC: SCENTIONI@NEXSENPRUET.COM

Docket No. 32984-1

Declaration and Power of Attorney For Patent Application

English Language Declaration

As a below named in	nventor, I hereby declare	that:	
My residence, post o	office address and citizer	nship are as stated below next to	o my name,
first and joint invento	ginal, first and sole inver or (if plural names are lis ight on the invention enti	ntor (if only one name is listed be ted below) of the subject matter itled	elow) or an original, which is claimed and for
COMPACTING METH	OD AND APPARATUS		
the specification of w	hich -		
(check one)	•		
is attached hereto) .		·
☐ was filed on		as United States Application N	o or PCT International
Application Number			or or or international
and was amended	lon		
		(if applicable)	
I hereby state that I had including the claims, a	ave reviewed and under s amended by any amer	stand the contents of the above ndment referred to above.	identified specification,
 1.56, including for co between the filing date continuation-in-part ap hereby claim foreign 	entinuation-in-part application of the prior application plication. priority benefits under	which is material to patentability ations, material information wand the national or PCT internation of U.S.C. 119(a)-(d) or (f), or	hich became available ational filing date of the
application which desi below and have also nventor's or plant bree	gnated at least one col identified below, by cl	ghts certificate(s), or 365(a) of untry other than the United Stanecking the box, any foreign sol, or any PCT international appority is claimed.	ates of America, listed application for patent.
rior Foreign Applicatio	on(s)		Priority Not Claimed
Number)	(Country)	(Day/Month/Year Filed)	-
Number)	(Country)	(Day/Month/Year Filed)	
Number)	(Country)	(Day/Month/Year Filed)	. 🕦

Form PTO-SB-01 (9-95) (Modified)

(An-line)		
(Application Serial No.)	(Filing Date)	
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(Application Serial No.)	(Filing Date)	
section 365(c) of any PCT Internations asofar as the subject matter of e inited States or PCT International S.C. Section 112, Tacknowledge	each of the claims of this a al application in the manner ge the duty to disclose to the	of any United States application(s), on the United States, listed below and pplication is not disclosed in the prior provided by the first paragraph of 3 to United States Patent and Trademan
ection 365(c) of any PCT Internation as the subject matter of entired States or PCT International S.C. Section 112, I acknowledge ffice all information known to material section 119.	each of the claims of this a al application in the manner ge the duty to disclose to the ne to be material to patenta ble between the filing date o	ng the United States, listed below and pplication is not disclosed in the price provided by the first paragraph of 3
ection 365(c) of any PCT Internations sofar as the subject matter of enited States or PCT International S.C. Section 112, I acknowledge fice all information known to mection 1.56 which became availal PCT International filing date of the section 1.56.	each of the claims of this a al application in the manner ge the duty to disclose to the ne to be material to patenta ble between the filing date o nis application:	ng the United States, listed below and pplication is not disclosed in the price provided by the first paragraph of 3 to United States Patent and Trademark bility as defined in Title 37, C. F. Ref the prior application and the national
ection 365(c) of any PCT Internation as the subject matter of enited States or PCT International S.C. Section 112, I acknowled fice all information known to meetion 1.56 which became available.	each of the claims of this a al application in the manner ge the duty to disclose to the ne to be material to patenta ble between the filing date o	ng the United States, listed below an opplication is not disclosed in the price provided by the first paragraph of 3 c United States Patent and Trademan bility as defined in Title 37 C F R
ection 365(c) of any PCT Internations sofar as the subject matter of enited States or PCT International S.C. Section 112, I acknowledge ffice all information known to mection 1.56 which became availal PCT International filing date of the soft international filing date.	each of the claims of this a al application in the manner ge the duty to disclose to the ne to be material to patenta ble between the filing date o nis application:	ng the United States, listed below an application is not disclosed in the price provided by the first paragraph of 3 to United States Patent and Trademark bility as defined in Title 37, C. F. R of the prior application and the national (Status)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. (list name and registration number)

MICHAEL A. MANN 32,825 WILLIAM Y. KLETT, III 41,903 SARA A. CENTIONI 50,543 JOHN B. HARDAWAY, III 26,554 J. HERBERT O'TOOLE 31,404 TOWNSEND M. BELSER, JR. 22,956

Send Correspondence to: SARA A. CENTIONI

NEXSEN PRUET, LLC

POST OFFICE DRAWER 2426 COLUMBIA, SC 29202-2426

Direct Telephone Calls to: (name and telephone number)

SARA A. CENTIONI (803) 771-8900

Full name of sole or first inventor J. BRIAN BAGWELL	
Sole or first Inventor's signature Tana Brail Residence	9-1-04
POST OFFICE BOX 1025, DARLINGTON, SC 29532 Citizenship USA	
Post Office Address POST OFFICE BOX 1025, DARLINGTON, SC 29532	

Full name of second inventor, if any	
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COMPACTING METHOD AND APPARATUS

Inventor:

Brian Bagwell

Address:

PO Box 1025

Darlington, SC 29532

USA

Citizenship: U.S.

CROSS REFERENCE TO RELATED APPLICATIONS: Not applicable.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT: Not applicable.

REFERENCE TO A SEQUENCE LISTING, A TABLE, OR A COMPUTER PROGRAM LISTING COMPACT DISK APPENDIX: Not Applicable.

BACKGROUND OF THE INVENTION:

[0001] The present invention relates to a compacting method and apparatus, and, in particular, a compacting method and apparatus employing the use of a forklift.

[0002] A major concern of metropolitan areas is refuse collection. Typically, industries within these areas incur significant expenses to collect and remove refuse. Current refuse collection systems involve the collection of refuse from local points and the transportation of this refuse to a disposal site located remote to the local points. Because of the hassle and inconvenience involved in refuse collection, these refuse collection systems are typically operated by independent contractors that will charge a fee based on various parameters, including the amount of trips that must be made to the disposal sites.

[0003] In the case that a refuse collection fee is directly related to the amount of pickups and the amount of filled refuse containers being picked up, it becomes desirable to pack as much refuse as possible into the containers. Accordingly, a device

sometimes used in refuse collection systems is a hydrolic packing ram. Although packing rams generally function to compact the refuse in containers, these rams tend to be very expensive and must be permanently installed and occupy valuable space. Additionally, packing rams require maintenance and electric service.

[0004] Accordingly, there remains a need for an inexpensive and effective refuse collection system.

SUMMARY OF THE INVENTION: 1

[0005] The following presents a simplified summary of the invention in order to provide a basic understanding of some aspects of the invention. This summary is not an extensive overview of the invention. It is not intended to identify key or critical elements of the invention or to delineate the scope of the invention. Its sole purpose is to present some concepts of the invention in a simplified form as a prelude to the more detailed description that is presented later.

[0006] According to its major aspects and briefly stated, the present invention is a method and system for compacting refuse in refuse containers such as roll off containers. As used herein, the term "roll off containers" refers to a refuse receptacle having an open top that is adapted to be carried by a vehicle, such as a truck. These receptacles are also referred to as "box rollers." The present system includes a forklift apparatus, which is used to engage a compaction weight. Once engaged, the compaction weight is placed over the open top of a roll off container including refuse.

Next, the compaction weight is lowered into the container by the forklift so as to compact the refuse.

[0007] A feature of the present invention is the use of a compaction method and system, which includes the combination of a forklift apparatus and a compaction weight. Heretofore, forklifts have been used primarily to lift and transport objects. However, the present invention permits a forklift to be used for the additional task of compacting, which was previously beyond its applicability. Additionally, the combination of a forklift apparatus with a compaction weight provides a relatively simple and economic way of compacting refuse in a receptacle such as a roll off container. As discussed, refuse compactors such as packing rams tend to be both expensive and complex. Further, packing rams must be permanently fixed and occupy valuable docking space for loading and unloading freight. In the present invention, the compaction system is portable and is 75% less than the cost of hydrolic packing rams. Moreover, the compaction system does not require any complicated machinery or special operator skill to implement. Finally, the compaction system can be conveniently stored and transported.

[0008] Another feature of the present invention is the use of a compaction weight that is dimensioned to be engaged by a forklift apparatus. The particular dimensions of the compaction weight contribute to the ease and simplicity of the compaction method and system. Furthermore, safety features can be included to the compaction weight to ensure that the forklift apparatus safely and effectively compacts the refuse in a receptacle without misplacing or dropping the weight during compaction.

[0009] Yet another feature of the present invention is the use of a compaction weight that is dimensioned to be received by a roll off container. The dimensions of the compaction weight can be particularly suited for compacting refuse within the roll off container. Therefore, the refuse can be most effectively and efficiently compacted without the need for multiple or complex compacting steps.

[0010] Other features and advantages of the present invention will be apparent to those skilled in the art from a careful reading of the Detailed Description of the Invention presented below and accompanied by the drawings.

BRIEF DESCRIPTION OF THE DRAWINGS:

In the drawings,

[0011] FIG. 1 is a side elevational view of a forklift apparatus and a compaction weight of a compaction system according to a preferred embodiment of the present invention;

[0012] FIG. 2 is a perspective view of a compaction weight according to a preferred embodiment of the present invention;

[0013] FIG. 3 is a side cross sectional view taken at Line 3-3 of FIG. 2 of a compaction weight according to a preferred embodiment of the present invention;

[0014] FIG. 4A is a front cross sectional view taken at Line 2-2 of FIG. 2 of a compaction weight according to a preferred embodiment of the present invention;

[0015] FIG. 4B and 4C are alternative detailed cross sectional views of the tinereceiving channels, according to a preferred embodiment of the present invention;

[0016] FIG. 5 is a perspective view of a safety feature of a compaction system according to a preferred embodiment of the present invention;

[0017] FIG. 6A is a side elevational view of a forklift apparatus and a compaction weight of a compaction system, with tines inserted in the channels of the compaction weight, according to a preferred embodiment of the present invention;

[0018] FIG. 6B is a side elevational view of a compaction system and a refuse receptacle, with compaction weight shown lifted by fork lift, according to a preferred embodiment of the present invention;

[0019] FIG. 6C is a side elevational view of a compaction system and a refuse receptacle, with lifted compaction weight poised over refuse receptacle, according to a preferred embodiment of the present invention;

[0020] FIG. 6D is a side elevational view of a compaction system with a refuse receptacle shown during compaction according to a preferred embodiment of the present invention;

[0021] FIG. 6E is a side elevational view of a compaction system with a refuse receptacle shown after compaction according to a preferred embodiment of the present invention;

[0022] FIG. 7 is a flow chart of a process according to a preferred embodiment of the present method.

DETAILED DESCRIPTION OF THE INVENTION:

[0023] Referring now to FIG. 1, there is shown a compaction system 10 of the present invention. As illustrated, the compaction system 10 includes a forklift apparatus 12 and a compaction weight 14. The particular features of the forklift apparatus 12 are not critical. Generally, the forklift apparatus 12 can include a conventional forklift chassis 16 including a frame being conventionally mounted upon a wheel assembly including axle members (not shown) and wheel members 17. A conventional drive assembly is conventionally mounted to the conventional forklift chassis 16 and includes a steering mechanism 18 and a foot pedal 20 being functionally and conventionally positioned at the front end of the forklift chassis 16. Forklift apparatus 12 further includes a seat 22 for a forklift operator. Finally, a conventional lift assembly 24

including a plurality of lifting tines 26 is movably and conventionally mounted upon a mast 27 located at the front end of the forklift chassis 16.

[0024] The compaction weight 14 of the present invention is shown in detail in FIGS. 2-4. As illustrated, the compaction weight 14 generally has a box-like shape including a top surface 30 and an opposing bottom surface 31, which are connected along the edges by side walls, 32, 33, 34, 35 perpendicular to the top surface 30 and bottom surface 31. Although no particular material is required for the construction of the compaction weight, preferably, the weight is made of a type of metal suitable for industrial applications, such as steel. On the top surface 30, the compaction weight 14 carries means for engaging 40 forklift tines 26 such as channels 40. Channels 40 are dimensioned to receive the tines 26 whereby the tines 26 are inserted into plural apertures 42. Although channels 40 are shown in FIG. 4A as being carried on the top surface 30 such as by welding; alternatively, channels 40' could be formed integrally with the top surface 30', as shown in FIG. 4B. Additionally, channels 40" could be formed integrally beneath the top surface 30" so that channels 40" are built into the body of the compaction weight 14, as shown by FIG. 4C. What is important to the practice of the invention is that the tines 26 of the forklift apparatus 12 include apertures in channels 40 dimensioned and formed to receive tines 26 so as to engage and support the compaction weight 14.

[0025] Within its outer surfaces, the compaction weight 14 is hollow and adapted to receive a mass to add the sufficient amount of weight for the practice of the present

compaction method. For example, the compaction weight 14 can include plated steel, as well as crushed asphalt or cement. Additionally, the compaction weight 14 can include a flowable mass, such as water or sand. The particular material that is included within the weight 14 will depend on both the types of refuse being compacted, as well as the lifting power of forklift apparatus 10 employed. In making the compaction weight, the top surface 30 of the weight can be welded onto the weight after the weight 14 is appropriately filled with mass. Alternatively, the compaction weight 14 can include an inlet or port 44 that can receive flowable mass.

[0026] A particular feature of the present invention is the use of a compaction method and system, which includes the combination of the forklift apparatus 12 and the compaction weight 14. Heretofore, forklifts have been used primarily to lift and transport objects. However, the present invention permits a forklift to be used for the additional task of compacting, which was previously beyond its applicability. Additionally, the combination of forklift apparatus 12 with compaction weight 14 provides a relatively simple and economic way of compacting refuse in a receptacle such as a roll off container. Because refuse compactors such as packing rams tend to be both expensive and complex and can take up a large amount of space within the receptacle, the compaction system 10 of the present invention is advantageous because it takes up no space within the refuse receptacle so that the receptacle can hold as much refuse as can be packed into it. Moreover, the compaction system 10 does not require any complicated machinery or special operator skill to implement.

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[0027] As shown in FIG. 3, the compaction weight 14 of the present invention can also include means for securing compaction weight 14 to forklift apparatus 10, such as a cable or a chain 46. Chain 46 adds a safety feature to the compaction system 10, because it ensures that compaction weight 14 remains engaged to the forklift apparatus 12 during operation.

[0028] As previously discussed, another feature of the present invention is the use of compaction weight 14 dimensioned to be engaged by forklift apparatus 12. The particular dimensions of the compaction weight 14 contribute to the ease and simplicity of the compaction method and system. Furthermore, the use of the chain 46 contributes to the safe and effective compacting of refuse in a receptacle, and minimizes the concern of misplacing or dropping the weight 14 during compaction.

[0029] In use, as shown in FIG. 5, the chain 46 is wrapped around a rigid member that forms part of the forklift apparatus 12 such as a tine support 50. Further, FIG. 5 shows how the tines 26 of the forklift apparatus 12 fit telescopically within the channels 40 to provide a secure and effective hold on the compaction weight 14.

[0030] FIGS. 6A-6E illustrate the compaction method of the present invention, and FIG. 7 provides a flow chart summarizing this process. As shown, the forklift apparatus 12 engages the compaction weight 14. In particular, the tines 26 of the forklift apparatus 12 are lifted by the forklift operator to an elevation that is level with the channels 40 of the compaction weight 14. Next, the tines 26 are inserted into the

apertures **42** of the engaging means **40**. Optionally, the chain **46** is attached to the forklift apparatus **12**.

[0031] Once the compaction weight 14 has been effectively secured to the forklift apparatus 12, the lift assembly 24 operates to lift the compaction weight 14 to an elevation that will be sufficient to clear the top edge of a roll off container 60. The compaction weight 14 is next brought forward by the forklift apparatus 12 so that the compaction weight 14 is directly above refuse 62 contained by the roll off container 60. To compact the refuse, the compaction weight 14 is simply lowered into the roll off container 60. Finally, the compaction weight 14 is lifted and removed by the forklift apparatus 12 leaving behind a compacted roll off container 60. Thereafter, additional refuse 62 can be added to the roll off container 60, and the compacting steps can be repeated until the roll off container 60 is filled with compacted refuse.

[0032] Although the particular dimensions of the compaction weight 14 are not critical to the practice of the invention, preferably, the compaction weight 14 is dimensioned to be received by or fit within a standard roll off container 60. Accordingly, the length, width, and depth of the compaction weight 14 is such that the roll off container 60 can receive compaction weight 14. For example, the length of the compaction weight 14 taken along the longitudinal horizontal axis at Line 2-2, shown in FIG. 2, is preferably less than the length of the roll off container 60 taken along its longitudinal horizontal axis. Standard roll off containers 60 range from approximately 22 feet in length, approximately 6 to approximately 8 feet in width, approximately 4 to

approximately 7 feet in depth. Generally, these roll off containers exist in three main sizes that are capable of handle 20, 30, and 40 yards of volume of refuse.

[0033] It will be apparent to those skilled in the art that many changes and substitutions can be made to the preferred embodiment herein described with departing from the spirit and scope of the present invention as defined by the appended claims.

WHAT IS CLAIMED IS:

- 1. A compaction system, comprising:
- a forklift apparatus; and
- a compaction weight, wherein said forklift has a plurality of tines and wherein said compaction weight has means for engaging said plurality of tines so that said forklift apparatus can lift said compaction weight.
- 2. The compaction system as recited in claim 1, wherein said engaging means is dimensioned to receive said plurality of tines.
- 3. The compaction system as recited in claim 1, wherein said compaction weight includes a top surface, an opposing bottom surface, and side walls that are perpendicular to said top surface and said bottom surface and that connect said top surface and said bottom surface.
- 4. The compaction system as recited in claim 3, wherein said engaging means is formed integrally with said top surface.
- 5. The compaction system as recited in claim 3, wherein said engaging means is carried on top of said top surface.

- 6. The compaction system as recited in claim 1, further comprising means for securing said compaction weight to said forklift apparatus.
 - 7. A compaction system, comprising:
 - a forklift apparatus having a plurality of tines; and
 - a compaction weight having means for engaging said plurality of tines; and
- a roll off container, wherein said compaction weight is dimensioned to be received by said roll off container.
- 8. The compaction system as recited in claim 7, wherein said engaging means is dimensioned to receive said plurality of tines.
- 9. The compaction system as recited in claim 7, wherein said compaction weight includes a top surface, an opposing bottom surface, and side walls that are perpendicular to said top surface and said bottom surface and that connect said top surface and said bottom surface and said bottom surface.
- 10. The compaction system as recited in claim **9**, wherein said engaging means is formed integrally with said top surface.
- 11. The compaction system as recited in claim 9, wherein said engaging means is carried on top of said top surface.

- 12. The compaction system as recited in claim 7, further comprising means for securing said compaction weight to said forklift apparatus.
- 13. A method for compacting refuse within a roll off container, comprising the steps of:

providing a roll off container with an open top;

placing refuse in said roll off container;

providing a forklift apparatus having a plurality of tines;

providing a compaction weight having channels formed therein;

elevating said plurality of tines to the same elevation of said channels;

inserting said plurality of tines within said channels;

elevating said compaction weight with said forklift apparatus to an elevation that is above the top edge of a roll off container;

moving said compaction weight with said forklift apparatus over said roll off container; and

lowering said compaction weight with said forklift apparatus onto said refuse in said roll off container to compact said refuse.

14. The method for compacting as recited in claim 13, further comprising the step of securing said compaction weight to said forklift apparatus.

15. The method for compacting as recited in claim 13, further comprising the steps of:

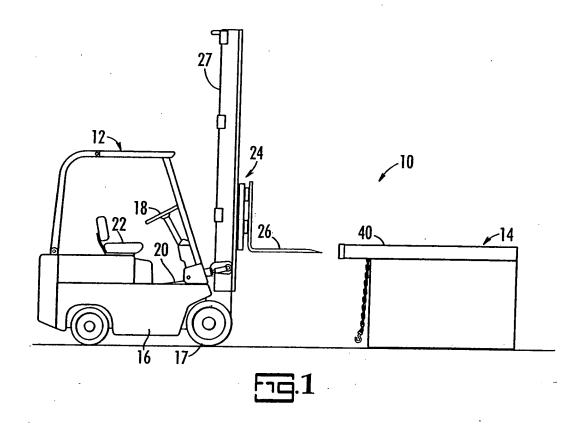
elevating said compaction weight with said forklift apparatus after said lowering step;

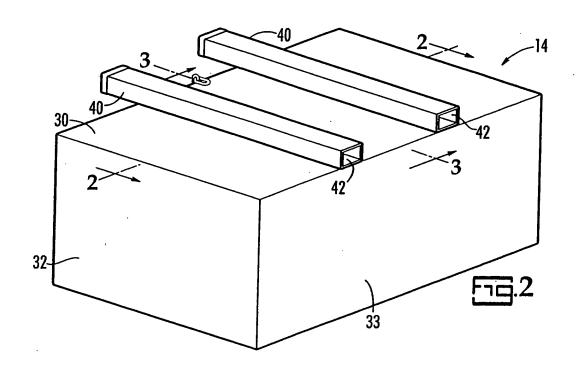
filling said compacted roll off container with additional refuse; and repeating said lowering steps to compact said additional refuse.

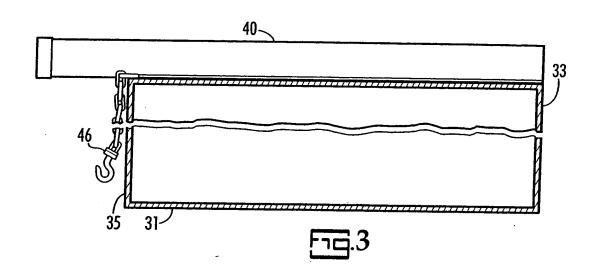
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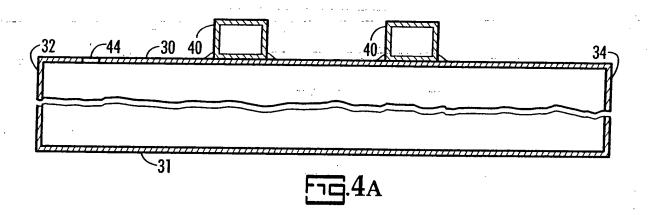
A compaction system and method including a forklift apparatus that engages a compaction weight. The compaction weight is lifted by the forklift apparatus over the open top of a roll off container. Thereafter, the weight is lowered into the roll off container to compact the refuse within the roll off container.

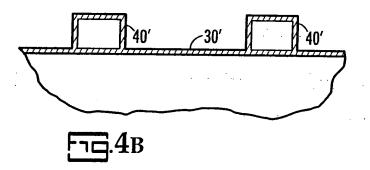


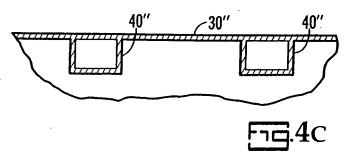


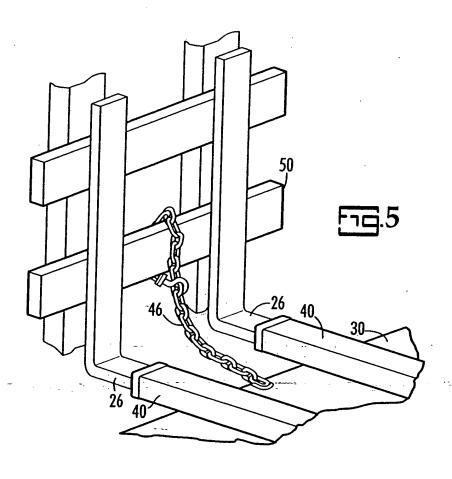


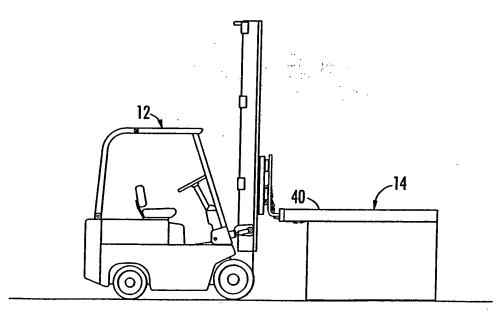




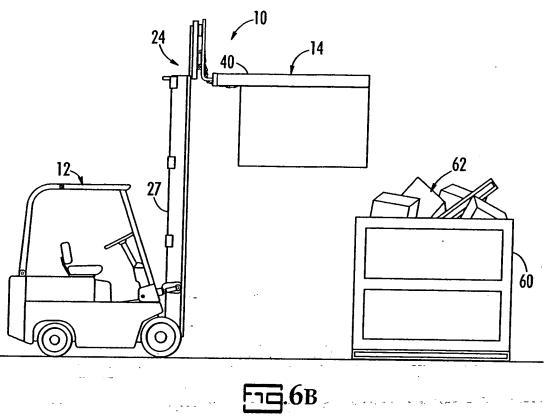




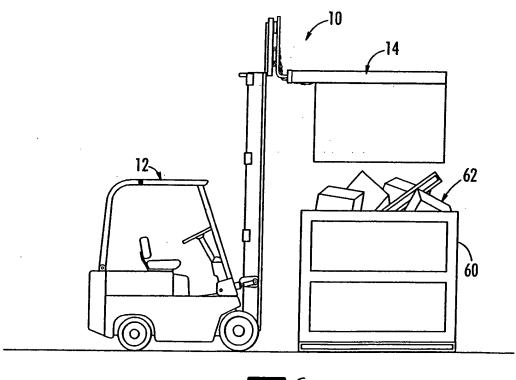




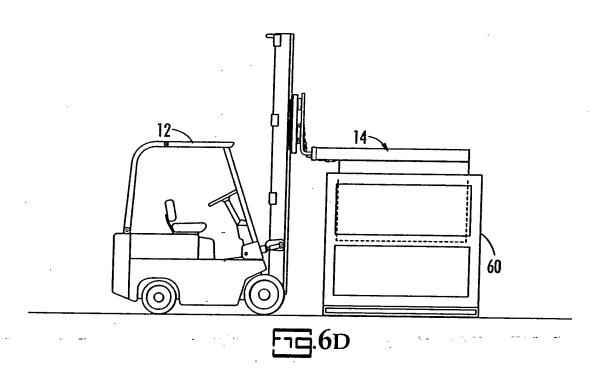
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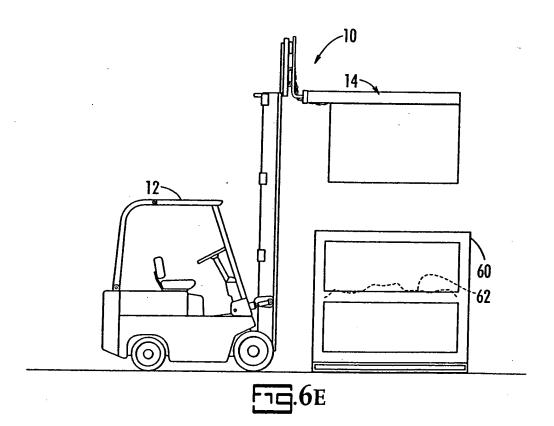


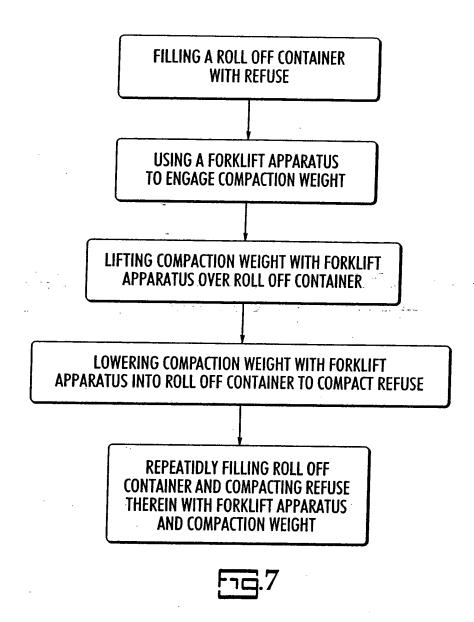




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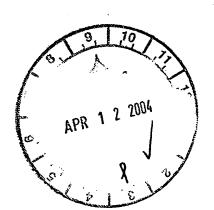


PATENT APPLICATION FILING IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Transmittal Letter; Patent Application Transmittal Letter; Utility Patent Application Transmittal; Power of Attorney; Formal Drawings; Certificate of Express Mailing; Postcard

In re: Brian Bagwell
Atty Docket: 32984-1
Atty: SARA A. CENTIONI
Title: Compacting Matter

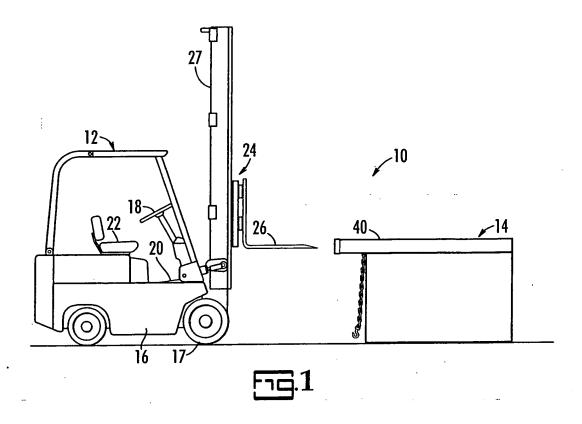
Compacting Method and Apparatus

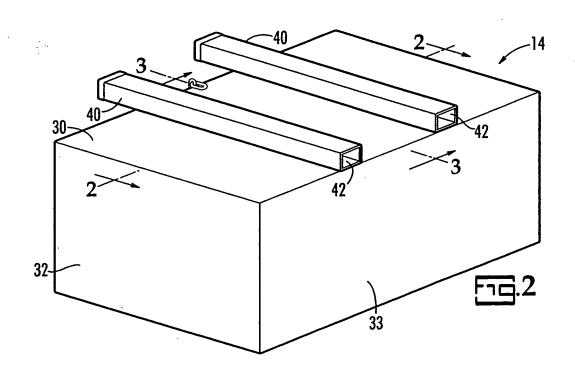


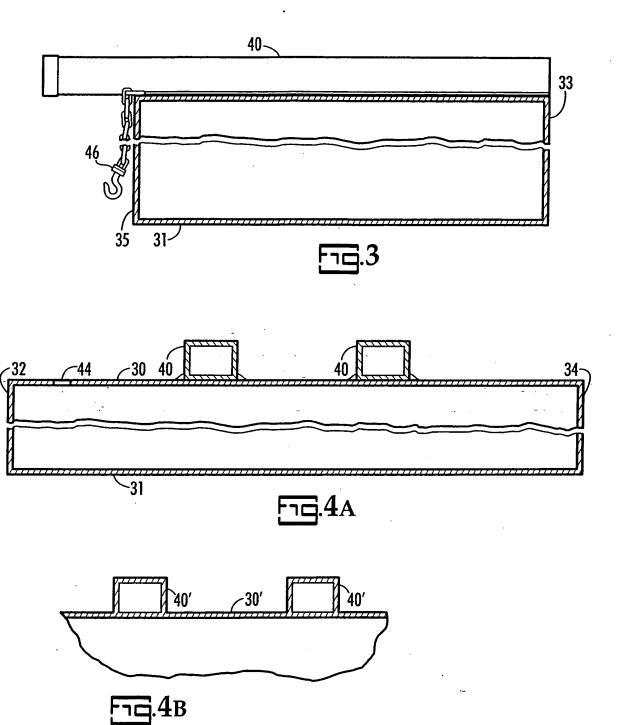
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Serial No.	Filing Date HEREWITH	Examiner	Group Art Unit
Invention: COMPACTIN	NG METHOD AND APPARAT	TUS	
	following correspondence: N AND RELATED DOCUME	NTS	
	he United States Postal Service	of correspondence) ce ™Express Mail Post Office to Add for Patents, P.O. Box 1450, Alexa	
	APRIL 1, 2004 (Date)	MARIE COBB (Typed or Printed Name of Person Mailing) (Signature of Person Mailing Corre EV 331626075 US ("Express Mail" Mailing Label I	SV43 espondence)

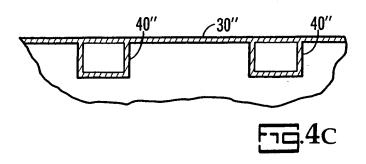
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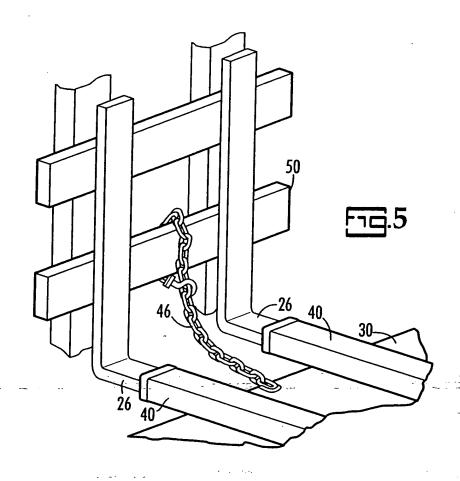
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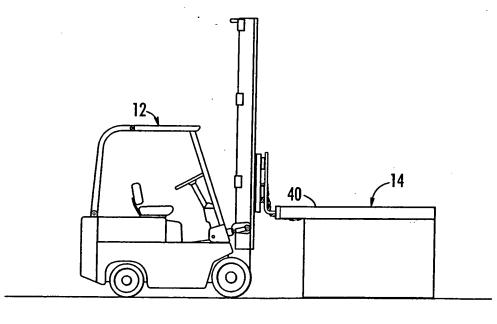




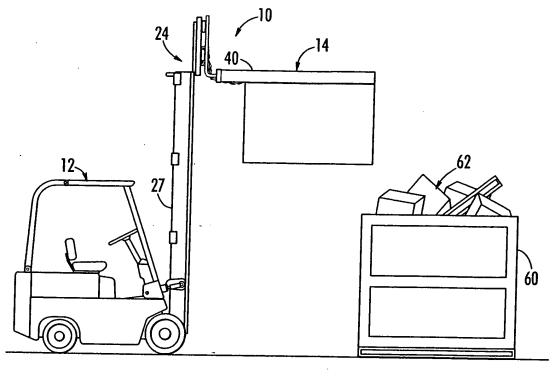




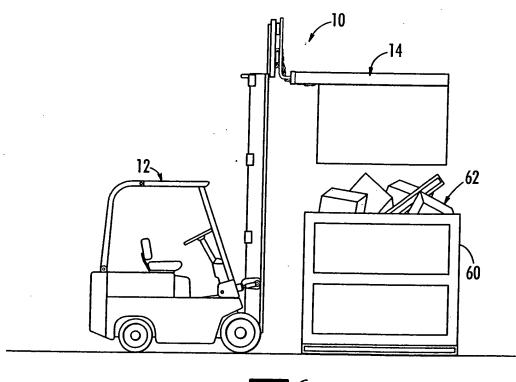




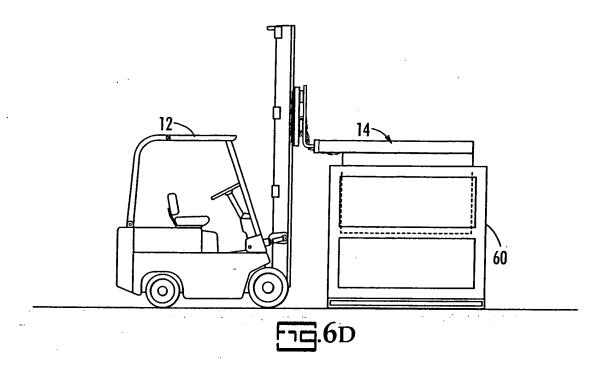
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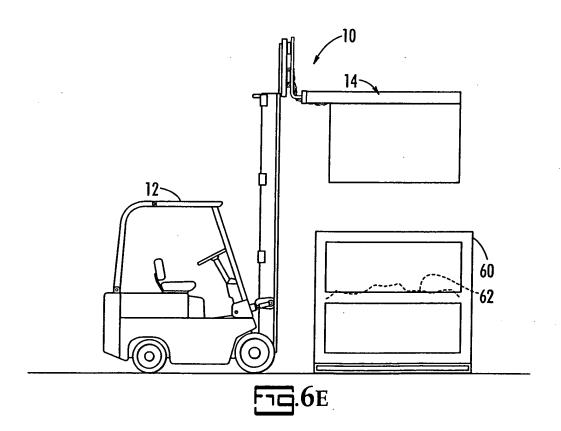


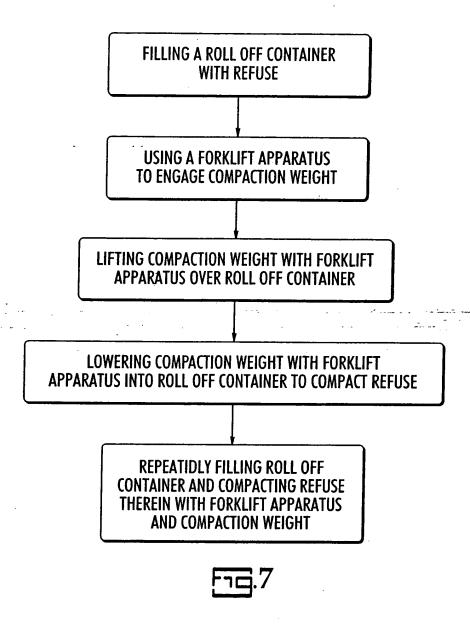
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE Response to Notice to File Missing Parts of Application (3pgs); Notice Of Incomplete Nonprovisional Application, Petition; (1 page); Affidavit Of Sara A. Centioni (2 pages); Affidavit of A. Marie Cobb (35 pages); Formal drawings (6 pages)

In re:

Atty Docket:

32984-01

10/816,058

Filing Date:

April 1, 2004

Serial No.: Patent No:

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Examining Atty:

Atty: Title: SARA A. ĈENTIONI (803) 253-8282 Compacting Method and Apparatus

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CERTIFICATE OF Applicant(s): BAGWE		ST CLASS MAIL (37 CFR 1.8)	Docket No. 32984-1	
Application No. 10/816,058	Filing Date 04/01/2004	Examiner	Customer No.	Group Art Unit
Invention: COMPACTING METH	OD AND APPARATUS			
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